

CLAIMS

What is claimed is:

1. A printhead ink supply structure comprising:

5 a silicon substrate having a plurality of thermal elements and a main ink supply channel, and the main ink supply channel connecting to an ink cartridge of the printhead;

a first barrier layer having a plurality of firing chambers installed at positions corresponding to the thermal elements and a plurality of ink channels connecting to the firing chambers and the main ink supply channel;

10 a second barrier layer having a plurality of slots extending from the main ink supply channel to the inlets of the ink channels; and

a nozzle plate covering the first barrier layer and the second barrier layer, having a plurality of nozzles installed at positions corresponding to the firing chambers.

15 2. The printhead ink supply structure of claim 1, wherein the first barrier layer is located under the second barrier layer to make each of the slots ends near the top of the inlet of one of the ink channels.

3. The printhead ink supply structure of claim 1, wherein the first barrier layer is between the nozzle plate and the second barrier layer.

20 4. The printhead ink supply structure of claim 3, wherein the second barrier layer has a plurality of holes at positions corresponding to the nozzles.

5. The printhead ink supply structure of claim 1, wherein the second barrier layer is under the first barrier layer.

6. The printhead ink supply structure of claim 1, wherein the second barrier layer is between the nozzle plate and the first barrier layer so that each of the slots ends near the top of the inlet of one of the ink channels.

7. A printhead ink supply structure comprising:

5 a silicon substrate having a plurality of thermal elements and a main ink supply channel, and the main ink supply channel connecting to an ink cartridge of the printhead;

10 a first barrier layer having a plurality of firing chambers installed at positions corresponding to the thermal elements and a plurality of ink channels connecting to the firing chambers and the main ink supply channel;

a second barrier layer provided on the upper and lower sides of the first barrier, each having a plurality of slots extending from the main ink supply channel to the inlets of the ink channels; and

15 a nozzle plate covering the first barrier layer or the second barrier layer and having a plurality of nozzles installed at positions corresponding to the firing chambers.

8. The printhead ink supply structure of claim 7, wherein each of the slots ends on the outer side of the inlet of one of the ink channels.